



Image may differ from product. See technical specification for details.

1224 M

Self-aligning ball bearing

Self-aligning ball bearings have two rows of balls, a common spheroidal raceway in the outer ring and two deep uninterrupted raceway grooves in the inner ring. They are insensitive to angular misalignment of the shaft relative to the housing, which can be caused, for example, by shaft deflection.

- Accommodate static and dynamic misalignment
- Excellent high-speed performance
- Excellent light load performance
- Low friction

Overview

Dimensions

Bore diameter	120 mm
Outside diameter	215 mm
Width	42 mm

Performance

Basic dynamic load rating	119 kN
Basic static load rating	53 kN
Reference speed	6 300 r/min
Limiting speed	4 000 r/min

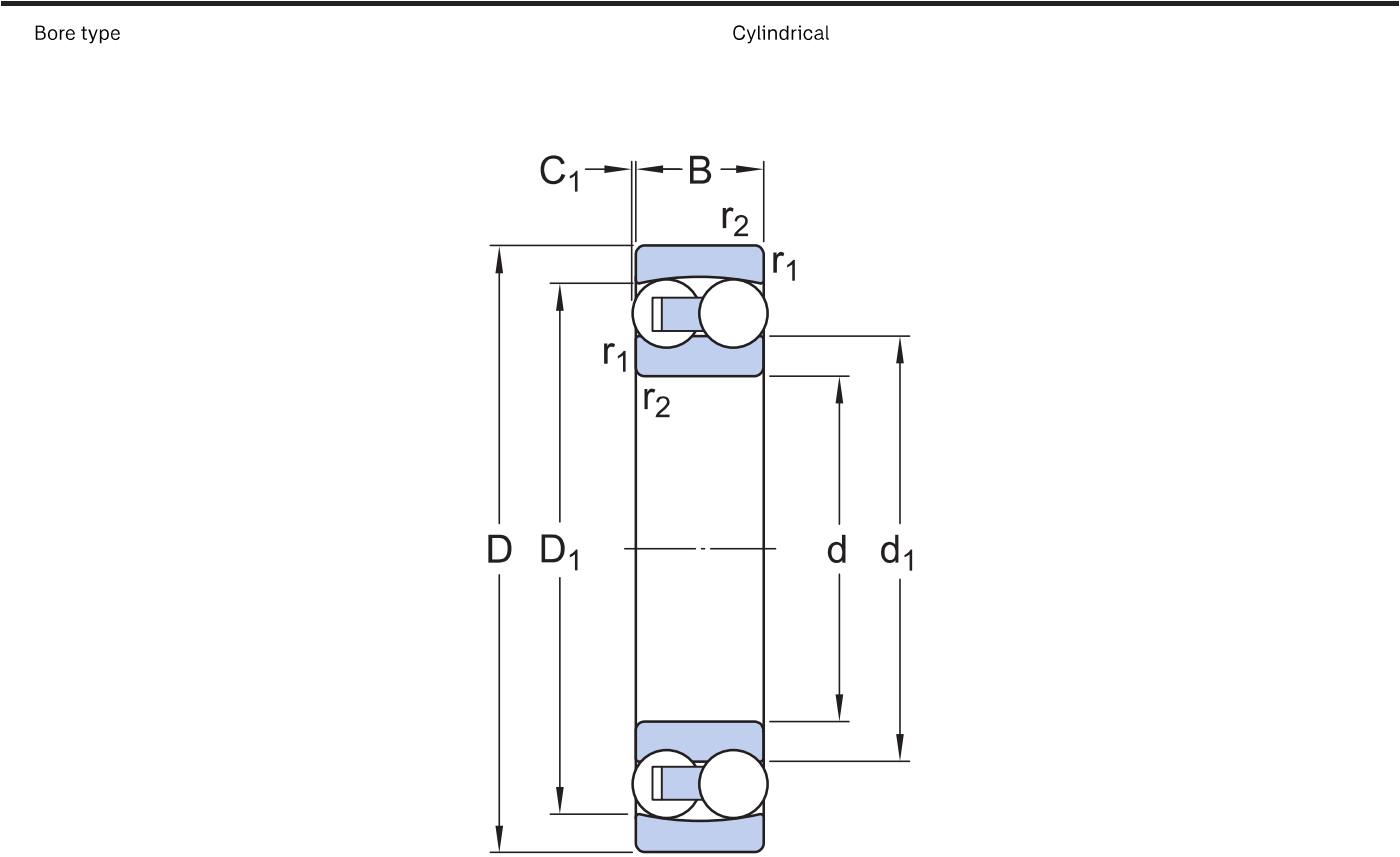
Properties

Retaining feature, inner ring	None
Locating feature, bearing outer ring	None
Number of rows	2
Bore type	Cylindrical
Cage	Machined metal
Radial internal clearance	CN
Tolerance class	Normal
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

Logistics

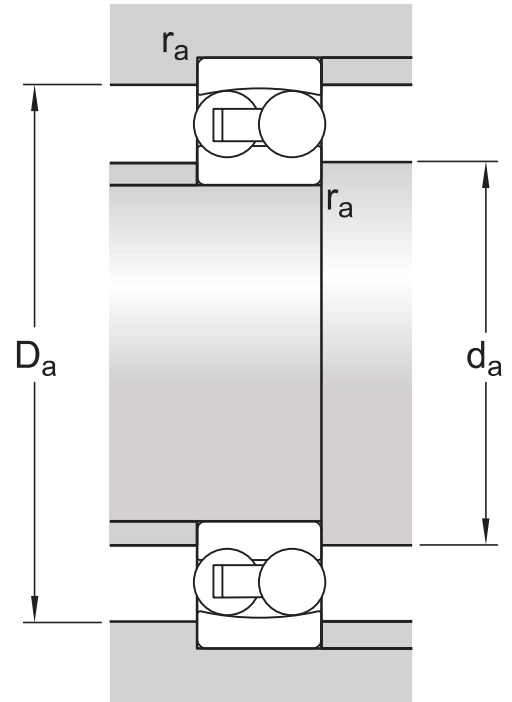
Product net weight	6.81 kg
eClass code	23-05-08-06
UNSPSC code	31171532

Technical specification



Dimensions

d	120 mm	Bore diameter
D	215 mm	Outside diameter
B	42 mm	Width
d ₁	≈ 149 mm	Shoulder diameter inner ring
D ₁	≈ 187.2 mm	Shoulder diameter outer ring
C ₁	1.271 mm	Protrusion of the balls from bearing side faces
r _{1,2}	min. 2.1 mm	Chamfer dimension



Abutment dimensions

d_a	min. 132 mm	Abutment diameter shaft
D_a	max. 203 mm	Abutment diameter housing
r_a	max. 2 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	119 kN
Basic static load rating	C_0	53 kN
Fatigue load limit	P_u	2.12 kN
Reference speed		6 300 r/min
Limiting speed		4 000 r/min
Permissible angular misalignment	α	2.5 °
Calculation factor	k_r	0.04
Limiting value	e	0.19
Calculation factor	Y_0	3.6
Calculation factor	Y_1	3.3
Calculation factor	Y_2	5.1

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- [Tolerances: Normal, JS7](#)
- [Radial internal clearance: table](#)

BEARING INTERFACES

- [Seat tolerances for standard conditions](#)
- [Tolerances and resultant fits](#)

More Information

 Product details Designs and variants General bearing specifications Loads Temperature limits Permissible speed Design considerations Mounting Designation system	 Engineering information Principles of rolling bearing selection General bearing knowledge Bearing selection process Bearing interfaces Seat tolerances for standard conditions Selecting internal clearance Lubrication Sealing, mounting and dismounting Bearing failure and how to prevent it	 Tools SKF Product select - Select and evaluate bearing SKF Product select - Combine housing with bearing SimPro Quick LubeSelect for SKF greases Heater selection tool Drive-up Method Program Oil Injection Method Program Tool and Accessory Selector for sleeves and shafts
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